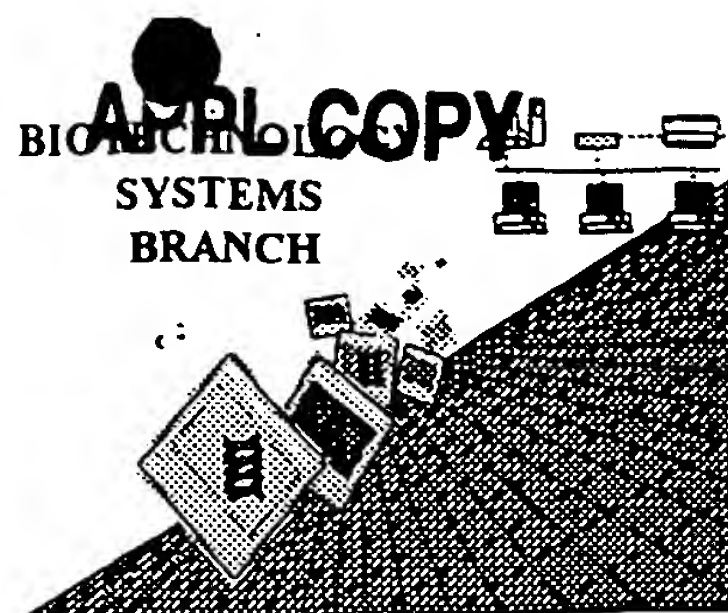


## RAW SEQUENCE LISTING ERROR REPORT



16C1  
#5/ K.T.  
6/19  
Raw  
Seq.  
Listing  
(error)

The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) detected errors when processing the following computer readable form:

Application Serial Number: 09/721,414A

Source: OIPET

Date Processed by STIC: 5/8/2001

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THE ATTACHED PRINTOUT EXPLAINS DETECTED ERRORS.

PLEASE FORWARD THIS INFORMATION TO THE APPLICANT BY EITHER:

- 1) INCLUDING A COPY OF THIS PRINTOUT IN YOUR NEXT COMMUNICATION TO THE APPLICANT, WITH A NOTICE TO COMPLY or,
- 2) TELEPHONING APPLICANT AND FAXING A COPY OF THIS PRINTOUT, WITH A NOTICE TO COMPLY

FOR CRF SUBMISSION QUESTIONS, PLEASE CONTACT MARK SPENCER, 703-308-4212.

FOR SEQUENCE RULES INTERPRETATION, PLEASE CONTACT ROBERT WAX, 703-308-4216.

PATENTIN 2.1 e-mail help: [patin21help@uspto.gov](mailto:patin21help@uspto.gov) or phone 703-306-4119 (R. Wax)

PATENTIN 3.0 e-mail help: [patin3help@uspto.gov](mailto:patin3help@uspto.gov) or phone 703-306-4119 (R. Wax)

TO REDUCE ERRORED SEQUENCE LISTINGS, PLEASE USE THE CHECKER  
VERSION 3.0 PROGRAM, ACCESSIBLE THROUGH THE U.S. PATENT AND  
TRADEMARK OFFICE WEBSITE. SEE BELOW:

### Checker Version 3.0

The Checker Version 3.0 application is a state-of-the-art Windows based software program employing a logical and intuitive user-interface to check whether a sequence listing is in compliance with format and content rules. Checker Version 3.0 works for sequence listings generated for the original version of 37 CFR §§1.821 – 1.825 effective October 1, 1990 (old rules) and the revised version (new rules) effective July 1, 1998 as well as World Intellectual Property Organization (WIPO) Standard ST.25.

Checker Version 3.0 replaces the previous DOS-based version of Checker, and is Y2K-compliant. Checker allows public users to check sequence listings in Computer Readable form (CRF) before submitting them to the United States Patent and Trademark Office (USPTO). Use of Checker prior to filing the sequence listing is expected to result in fewer errored sequence listings, thus saving time and money.

Checker Version 3.0 can be down loaded from the USPTO website at the following address:

<http://www.uspto.gov/web/offices/pac/checker>

**APPL COPY**

Application No.: 09/221414

**NOTICE TO COMPLY WITH REQUIREMENTS FOR PATENT APPLICATIONS CONTAINING  
NUCLEOTIDE SEQUENCE AND/OR AMINO ACID SEQUENCE DISCLOSURES**

The nucleotide and/or amino acid sequence disclosure contained in this application does not comply with the requirements for such a disclosure as set forth in 37 C.F.R. 1.821 - 1.825 for the following reason(s):

- ☒ 1. This application clearly fails to comply with the requirements of 37 C.F.R. 1.821-1.825. Applicant's attention is directed to these regulations, published at 1114 OG 29, May 15, 1990 and at 55 FR 18230, May 1, 1990.
- ☐ 2. This application does not contain, as a separate part of the disclosure on paper copy, a "Sequence Listing" as required by 37 C.F.R. 1.821(c).
- ☐ 3. A copy of the "Sequence Listing" in computer readable form has not been submitted as required by 37 C.F.R. 1.821(e).
- ☐ 4. A copy of the "Sequence Listing" in computer readable form has been submitted. However, the content of the computer readable form does not comply with the requirements of 37 C.F.R. 1.822 and/or 1.823, as indicated on the attached copy of the marked-up "Raw Sequence Listing."
- ☐ 5. The computer readable form that has been filed with this application has been found to be damaged and/or unreadable as indicated on the attached CRF Diskette Problem Report. A Substitute computer readable form must be submitted as required by 37 C.F.R. 1.825(d).
- ☐ 6. The paper copy of the "Sequence Listing" is not the same as the computer readable form of the "Sequence Listing" as required by 37 C.F.R. 1.821(e).
- ☐ 7. Other: \_\_\_\_\_

**Applicant Must Provide:**

- ☒ An initial or substitute computer readable form (CRF) copy of the "Sequence Listing".
- ☒ An initial or substitute paper copy of the "Sequence Listing", as well as an amendment directing its entry into the specification.
- ☒ A statement that the content of the paper and computer readable copies are the same and, where applicable, include no new matter, as required by 37 C.F.R. 1.821(e) or 1.821(f) or 1.821(g) or 1.825(b) or 1.825(d).

For questions regarding compliance to these requirements, please contact:

For Rules Interpretation, call (703) 308-4216

For CRF Submission Help, call (703) 308-4212

PatentIn Software Program Support (SIRA)

Technical Assistance.....703-287-0200

To Purchase PatentIn Software.....703-306-2600

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RAW SEQUENCE LISTING  
PATENT APPLICATION: US/09/721,414A

DATE: 05/08/2001  
TIME: 11:42:22

Input Set : A:\corrected sequence listing US non-prov. Suga.txt  
Output Set: N:\CRF3\05082001\I721414A.raw

*add these  
sequence  
identifiers*

*1507*

*W-->*

*1517*

*W-->*

*W-->*

*W-->*

*W-->*

*W-->*

*W-->*

*W-->*

*W-->*

*W-->*

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*W-->*

*W-->*

*pg 1-3*

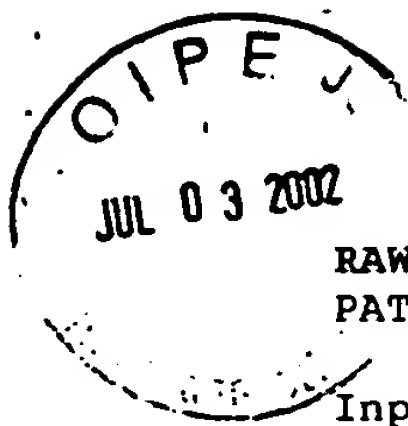
Does Not Comply  
Corrected Diskette Needed

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*this goes on a <223> line (per 1.823 of sequence rules)*

*(create a new  
<223> line)*

3 <110> APPLICANT: Suga, Hiroaki  
5 <120> TITLE OF INVENTION: Catalytic RNA Molecules with Aminoacylation Activity  
7 <130> FILE REFERENCE: 11520.0222  
10 <140> CURRENT APPLICATION NUMBER: US 09/721,414A  
11 <141> CURRENT FILING DATE: 2000-11-22  
13 <150> PRIOR APPLICATION NUMBER: US 60/167,331  
14 US 60/214,382 → *<150> US 60/214,382*  
15 <151> PRIOR FILING DATE: 1999-11-24  
16 2000-06-28 → *<151> 2000-06-28*  
18 <160> NUMBER OF SEQ ID NOS: 22  
20 <210> SEQ ID NO: 1  
21 <211> LENGTH: 110  
22 <212> TYPE: DNA  
23 <213> ORGANISM: artificial sequence  
25 <220> FEATURE:  
W--> 26 <221> NAME/KEY: n represents a, t, g or c *this goes on a <223> line (per 1.823 of sequence rules)*  
27 <222> LOCATION: 21-90  
28 <223> OTHER INFORMATION: synthetic oligonucleotide containing random pool of 70  
29 nucleotides  
31 <400> SEQUENCE: 1  
W--> 33 ggatcgctcag tgcattgaga nnnnnnnnnn nnnnnnnnnn 40  
W--> 34 nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn 80  
W--> 35 nnnnnnnnnn ggtggtatcc ccaaggggta 110  
37 <210> SEQ ID NO: 2  
38 <211> LENGTH: 76  
39 <212> TYPE: DNA  
40 <213> ORGANISM: artificial sequence  
42 <220> FEATURE:  
43 <223> OTHER INFORMATION: completely synthesized primer complementary to the otrNAGln  
45 <400> SEQUENCE: 2  
46 tggctgcggt acgaggattc gaacctcgga atgccggatt 40  
47 tagaaatccg gtcccttacc ccttggggat accacc 76  
50 <210> SEQ ID NO: 3  
51 <211> LENGTH: 52  
52 <212> TYPE: DNA  
53 <213> ORGANISM: artificial sequence  
55 <220> FEATURE:  
56 <223> OTHER INFORMATION: 5' primer containing T7 promoter sequence  
58 <400> SEQUENCE: 3  
59 ggtaacacgc atatgtaata cgactcacta taggatcgtc 40  
60 agtgcatga ga 52  
62 <210> SEQ ID NO: 4  
63 <211> LENGTH: 20  
64 <212> TYPE: DNA  
65 <213> ORGANISM: artificial sequence  
67 <220> FEATURE:  
68 <223> OTHER INFORMATION: 3' completely synthesized primer



RAW SEQUENCE LISTING  
PATENT APPLICATION: US/09/721,414A

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Output Set: N:\CRF3\05082001\I721414A.raw

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70 <400> SEQUENCE: 4  
71 tggctgcggt acgaggattc 20  
73 <210> SEQ ID NO: 5  
74 <211> LENGTH: 146  
75 <212> TYPE: RNA  
76 <213> ORGANISM: artificial sequence  
78 <220> FEATURE:  
79 <223> OTHER INFORMATION: pre-12 catalytic RNA  
81 <400> SEQUENCE: 5  
82 ggaucgucag ugcauugaga uuuccgcagc ccuucucacu 40  
83 aacggugggu cauggguauu ggcguuaggu gcgggaugcu 80  
84 acgcuggugg uauccccaag gguacgggac cggacauucg 120  
85 agauucgaau ccucguaccg cagcca 146  
88 <210> SEQ ID NO: 6  
89 <211> LENGTH: 151  
90 <212> TYPE: RNA  
91 <213> ORGANISM: artificial sequence  
93 <220> FEATURE:  
W--> 94 <221> NAME/KEY: n represents a, t, g or c  
95 <222> LOCATION: 12  
96 <223> OTHER INFORMATION: pre-38 catalytic RNA  
98 <400> SEQUENCE: 6  
OK 99 ggaucgucag uncauugaga uuuccgcagc ccuucucacu 40  
100 aacggugggu ucauggguau uggcguuagg ugcgggaugc 80  
101 uacuacgcug gugguauccc caaggguaacg ggaccggauc 120  
102 auucgagauu cgaauccucg uaccgcagcc a 151  
105 <210> SEQ ID NO: 7  
106 <211> LENGTH: 150  
107 <212> TYPE: RNA  
108 <213> ORGANISM: artificial sequence  
111 <220> FEATURE:  
112 <223> OTHER INFORMATION: pre-29 catalytic RNA  
114 <400> SEQUENCE: 7  
115 ggaucgucag ugcauugaga uuuccgcagg ccuucucac 40  
116 uaacgguggg ucauggguau uggcguuagg ugcgggaugc 80  
117 uacuacgcug gugguauccc caaggguaacg ggaccggaca 120  
118 uucgagauuc gaaucucgu accgcagcca 150  
120 <210> SEQ ID NO: 8  
121 <211> LENGTH: 150  
122 <212> TYPE: RNA  
123 <213> ORGANISM: artificial sequence  
125 <220> FEATURE:  
126 <223> OTHER INFORMATION: pre-36 catalytic RNA  
128 <400> SEQUENCE: 8  
129 ggaucgucag ugcauugaga uuuccgcagc ccuucucacu 40  
130 aacggugggu cauggguauu ggcguuaggu gcgggaugcu 80  
131 acuacgcugg ugguaucucc aaggguaacg gaccggauca 120  
132 uucgagauuc gaaucucgu accgcagcca 150  
134 <210> SEQ ID NO: 9

*g, t is not permitted in an RNA sequence - use 'u' instead  
more exploration to <223>*

## RAW SEQUENCE LISTING

DATE: 05/08/2001

PATENT APPLICATION: US/09/721,414A

TIME: 11:42:22

Input Set : A:\corrected sequence listing US non-prov. Suga.txt

Output Set: N:\CRF3\05082001\I721414A.raw

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135 <211> LENGTH: 150
136 <212> TYPE: RNA
137 <213> ORGANISM: artificial sequence
139 <220> FEATURE:
140 <223> OTHER INFORMATION: pre-24 catalytic RNA
142 <400> SEQUENCE: 9
143 ggaucgucag ugcauugaga uuuccgcagg ccuucucac      40
144 uaacgguggg ucauggguau uggcguuagg ugcgggaugc      80
145 uacuacgcug gugguauccc caagggguacg ggaccggaca     120
146 uucgagauuc gaaucucgu accgcagcca      150
148 <210> SEQ ID NO: 10
149 <211> LENGTH: 149
150 <212> TYPE: RNA
151 <213> ORGANISM: artificial Sequence
153 <220> FEATURE:
154 <223> OTHER INFORMATION: pre-25 catalytic RNA
156 <400> SEQUENCE: 10
157 ggaucgucag ugcauugaga uuuccgcagc ccuucucacu      40
158 aacggugggu cauggguauu ggcguuaggu gcgggaugcu      80
159 acuacgcugg ugguaucccc aagggguacgg gaccggacau     120
160 ucgagauucg aaucucgua ccgcagcca      149
163 <210> SEQ ID NO: 11
164 <211> LENGTH: 149
165 <212> TYPE: RNA
166 <213> ORGANISM: artificial Sequence
168 <220> FEATURE:
169 <223> OTHER INFORMATION: pre-22 catalytic RNA
171 <400> SEQUENCE: 11
172 ggaucgucag ugcauugaga uuuccgcagc ccuucucacu      40
173 aacggugggu cauggguauu ggcguuaggu gcgggaugcu      80
174 acuacgcugg ugguaucccc aagggguacgg gaucggacau     120
175 ucgagauucg aaucucgua ccgcagcca      149
178 <210> SEQ ID NO: 12
179 <211> LENGTH: 149
180 <212> TYPE: RNA
181 <213> ORGANISM: artificial Sequence
183 <220> FEATURE:
W--> 184 <221> NAME/KEY: n represents a u or c  ← move explanation to <223>
185 <222> LOCATION: 112
186 <223> OTHER INFORMATION: pre-5 catalytic RNA
188 <400> SEQUENCE: 12
189 ggaucgucag ugcauugaga uuuccgcagc ccuucucacu      40
190 aacggugggu cauggguauu ggcguuaggu gcgggaugcu      80
OK-> 191 acuacgcugg ugguaucccc aagggguacgg gnccggacau     120
192 ucgagauucg aaucucgua ccgcagcca      149
195 <210> SEQ ID NO: 13
196 <211> LENGTH: 149
197 <212> TYPE: RNA
198 <213> ORGANISM: artificial Sequence

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RAW SEQUENCE LISTING  
PATENT APPLICATION: US/09/721,414A

DATE: 05/08/2001  
TIME: 11:42:22

Input Set : A:\corrected sequence listing US non-prov. Suga.txt  
Output Set: N:\CRF3\05082001\I721414A.raw

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200 <220> FEATURE:
201 <223> OTHER INFORMATION: pre-19 catalytic RNA
203 <400> SEQUENCE: 13
204 ggauugcag ugcauugaga uuuccgcagc ccuucucacu      40
205 aacggguaggu cauggguaau ggcguuaggu gcgggaugcu      80
206 acuacgcugg ugguaucccc aaggguacgg gaccggacau     120
207 ucgagauucg aauccucgua ccgcagcca      149
210 <210> SEQ ID NO: 14
211 <211> LENGTH: 150
212 <212> TYPE: RNA
213 <213> ORGANISM: artificial Sequence
215 <220> FEATURE:
216 <223> OTHER INFORMATION: pre-8 catalytic RNA
218 <400> SEQUENCE: 14
219 ggauugcag ugcauugaga uuuccgcagc ccuucucacu      40
220 aacgguggggu ucauggguaau uggcguuagg ugcgggaugc      80
221 uacuacgcug gugguaucuu caaggguaucg ggaccggaca     120
222 uucuagauuc gaauccucgu accgcagcca      150
225 <210> SEQ ID NO: 15
226 <211> LENGTH: 148
227 <212> TYPE: RNA
228 <213> ORGANISM: artificial Sequence
230 <220> FEATURE:
231 <223> OTHER INFORMATION: pre-23 catalytic RNA
233 <400> SEQUENCE: 15
234 ggauugcag ugcauugaga uuuccgcagc ccuucucacu      40
235 aacgguggggu cauggguaau ggcguuaggu gcgggaugcu      80
236 acuacgcugg ugguauccca aggguaucgg accggacauu     120
237 cgagauucga auccucguac cgcagcca      148
240 <210> SEQ ID NO: 16
241 <211> LENGTH: 75
242 <212> TYPE: RNA
243 <213> ORGANISM: Escherichia coli
245 <220> FEATURE:
246 <223> OTHER INFORMATION: otrNA
248 <400> SEQUENCE: 16
249 ggugguauc ccaaggggua agggaccgga uucuaaauc      40
250 ggcauuccga gguucgaau cugcuaccgc agcca          75
252 <210> SEQ ID NO: 17
253 <211> LENGTH: 160
254 <212> TYPE: RNA
255 <213> ORGANISM: artificial sequence
257 <220> FEATURE:
258 <223> OTHER INFORMATION: H2 Leu catalytic RNA
260 <400> SEQUENCE: 17
261 ggauugcag ugcauugaga ugcccaaagc ccuucucacu      40
262 uccgguggggu caugcguuau ugcguaaggu gaggaugcu      80
263 agauugcggg ugguauccaa gggguaagg accggauucu     120
264 aaauccgcau uccgagguuc gaauccucgu accgcagcca     160

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RAW SEQUENCE LISTING  
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Input Set : A:\corrected sequence listing US non-prov. Suga.txt  
 Output Set: N:\CRF3\05082001\I721414A.raw

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266 <210> SEQ ID NO: 18
267 <211> LENGTH: 156
268 <212> TYPE: RNA
269 <213> ORGANISM: artificial sequence
271 <220> FEATURE:
272 <223> OTHER INFORMATION: D1-Leu catalytic RNA
274 <400> SEQUENCE: 18
275 ggauugcagc ugcuaugaga uagugucacu aggcgggggg      40
276 ugauagcgca uuugagguu ugguuugggg gguuauugcu      80
277 gaguucugg gugguaucca agggguaagg gaucuaaauc     120
278 cgacauuccg agguucgaau ccucguaccg cagcca      156
281 <210> SEQ ID NO: 19
282 <211> LENGTH: 35
283 <212> TYPE: RNA
284 <213> ORGANISM: artificial sequence
286 <220> FEATURE:
287 <223> OTHER INFORMATION: RNA forming a minihelix
289 <400> SEQUENCE: 19
290 ggugguacga gguucgaauc cucguaccgc agcca      35
292 <210> SEQ ID NO: 20
293 <211> LENGTH: 73
294 <212> TYPE: RNA
295 <213> ORGANISM: artificial sequence
297 <220> FEATURE:
298 <223> OTHER INFORMATION: V1 variant of otrNA
300 <400> SEQUENCE: 20
301 ggugguaucc ccaagggguc gggaccggau ucuaaauccg      40
302 gcauucgaga uucgaauc cuuaccgcag cca      73
304 <210> SEQ ID NO: 21
305 <211> LENGTH: 75
306 <212> TYPE: RNA
307 <213> ORGANISM: artificial sequence
309 <220> FEATURE:
310 <223> OTHER INFORMATION: V2 variant of otrNA
312 <400> SEQUENCE: 21
313 ggugguaucc ccaaggggua cgggaccgga uucuaaaucc      40
314 ggcauuccga gauucgaauc cucguaccgc agcca      75
317 <210> SEQ ID NO: 22
318 <211> LENGTH: 73
319 <212> TYPE: RNA
320 <213> ORGANISM: artificial sequence
322 <220> FEATURE:
323 <223> OTHER INFORMATION: V3 variant of otrNA
325 <400> SEQUENCE: 22
327 ggugguaucc ccaaggggaa gggaccggau ucuaaauccg      40
328 gcauucgagg uucgaauc cuuaccgcag cca      73

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## VERIFICATION SUMMARY

DATE: 05/08/2001

PATENT APPLICATION: US/09/721,414A

TIME: 11:42:23

Input Set : A:\corrected sequence listing US non-prov. Suga.txt

Output Set: N:\CRF3\05082001\I721414A.raw

L:14 M:259 W: Allowed number of lines exceeded, <150> PRIOR APPLICATION NUMBER:  
L:16 M:259 W: Allowed number of lines exceeded, <151> PRIOR FILING DATE:  
L:26 M:257 W: Feature value mis-spelled or invalid, <221> Name/Key for SEQ ID#:1  
L:33 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:1  
L:34 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:1  
L:35 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:1  
L:94 M:257 W: Feature value mis-spelled or invalid, <221> Name/Key for SEQ ID#:6  
L:99 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:6  
L:184 M:257 W: Feature value mis-spelled or invalid, <221> Name/Key for SEQ ID#:12  
L:191 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:12